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In its simplest form, the problem of education and cultural deprivation reduces to one of how children who have been disadvantaged by their environment can be brought up to the educational level of more fortunate children.

Many approaches are possible. Among the variables which must be studied in depth are: the student, home environment, peer group, the learning task, the teacher, school organization, community, and society in general. The many problems posed should be solved quickly since they are becoming increasingly dangerous to the welfare of our society.

Three approaches to analysis of the problems of education and cultural deprivation are given. The first points out the confusion of terms which results when the level of discourse is not clarified. The framework describes the social environment as a system. The interrelated analytic elements are culture, the institution, and the individual. The second proposal is based on the view that most forms of learning beyond the first two or three years of the child's life depend upon transfer from prerequisite habits and skills. School tasks should be based upon habits and skills which comprise learning abilities of the culturally deprived; appropriate educational methods should be developed. The third approach describes the functioning intelligence of the child in terms of its components. The variables are related to particular characteristics of the culturally deprived.

Major problems and more specific research questions are suggested. These include the relationship of: home environment, social class, and peer groups; language cognition and learning; personality and motivation; testing and diagnosis. Under "school programs and personnel," suggestions for research are made relating to curricula, teachers, and school organizations.

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RESEARCH PROBLEMS

OF

EDUCATION AND CULTURAL DEPRIVATION

Edited by

Benjamin S. Bloom
Department of Education
University of Chicago

Based on working papers and suggestions contributed by participants

in the

RESEARCH CONFERENCE ON

EDUCATION AND CULTURAL DEPRIVATION

Supported by the Cooperative Research Program of the Office of Education,
U. S. Department of Health, Education and Welfare (Contract HEW-OE-4-10-256)

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RESEARCH CONFERENCE

ON

EDUCATION AND CULTURAL DEPRIVATION

June 8 - 12, University of Chicago

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SECTION 1

Introduction

Introduction

The Research Conference on Education and Cultural Deprivation was held at the University of Chicago on June 8-12, 1964. The participants in the conference were outstanding research specialists in education as well as such related disciplines as psychology, psychiatry, anthropology, sociology, child development, and linguistics.

This conference was called to take stock of what we do know about cultural deprivation as it relates to the schools and to indicate the research needs on problems of education and cultural deprivation.

The participants worked in small groups on the preparation of working papers to summarize what we now know about cultural deprivation and the implications of this knowledge for the work of the schools. The report on this part of the conference is Compensatory Education for Cultural Deprivation.[1]

As we worked in these small groups we found many gaps in our knowledge and understanding of the relations between cultural deprivation and education. These gaps have been translated into questions for further research. Following the preparation of these working papers, individuals and committees of the participants raised additional questions for research. The general as well as the specific questions, problems, and suggestions for further research have been included in section 3 of this report.

However, some of the participants took the view that many of the important research questions for education and cultural deprivation cannot be developed or understood unless they are related to a theoretical view of human behavior. It was urged that we attempt to formulate several alternative ways of analyzing the problems. Three rather distinct ways of viewing the problems of education and cultural deprivation were developed by individuals or groups. Each of these views should be helpful as a basis for organizing and understanding some of the research problems and suggestions in section 3 of this report. In addition, each view may be used to devise additional research problems, to determine particular methodological approaches, and as a way of relating research findings to a broader context of research and theory. These approaches, which are not mutually exclusive, are described briefly in section 2 of this report.

The careful reader will find that many of the research questions and suggestions have implications beyond the school problems of culturally deprived pupils. Some of the questions deal with the most fundamental of human problems. Others have to do with detailed questions of how the schools may best relate to particular groups of children.

In preparation for the Research Conference, an annotated bibliography of the more significant research contributions was developed. This bibliography was found so useful in taking stock of the field and as a basis for

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[1] Bloom, B. S., Davis, A., and Hess, R., 1965. Compensatory education for cultural deprivation. New York: Holt, Rinehart, and Winston, Inc.

further research, that we have revised it and included it as Part II of the book Compensatory Education for Cultural Deprivation.[1] It is likely that the interested research worker will find this bibliography of great value when he plans his own research. It is also likely that the items in this bibliography will prove to be useful in suggesting research questions and methods.

It is not to be expected that individual research workers will seize on particular research questions suggested here and begin their own research. Each research worker must formulate his own research problems and plans. What is hoped is that the range or spectrum of questions posed in this report will stimulate many research workers in education and the behavioral sciences to consider education and cultural deprivation as a meaningful, and, we hope, fruitful area for research. The work of the conference will be most useful if it stimulates research workers to develop even more searching research questions than the ones we have been able to pose.

A great deal of research is needed on education and cultural deprivation. Such research must, more adequately, help us to understand the etiology, consequences, and treatment of cultural deprivation as it relates to education. The writer has urged that there be an all-out effort to attack the research problems in this field. Such an effort should enlist the ablest workers in a serious attempt to find useful solutions to these problems. Such an effort must involve research workers in the behavioral sciences as well as in education, per se. It is earnestly hoped that the next two or three years will see an all-out attack on these problems, supported by government as well as other funds.

We must not be blind to the full complexity of the problems of cultural deprivation in a rapidly changing society. Even the most avid research worker or supporter of research will not see the problems of education and cultural deprivation as purely problems for research. Research and new knowledge are desperately needed to deal with the many problems of education posed by cultural deprivation. But, perhaps of even greater importance, are the many facets of these problems which have to do with social, political, and economic issues. Research can make significant contributions to the attack on problems of cultural deprivation, but the effective use of research findings requires a society which is fully committed to the solution of these problems.

Dimensions of the Problem

In its simplest form, the problem of education and cultural deprivation reduces to one of how children who have been disadvantaged by their environment can be so educated that differences in learning and motivation for learning between them and more advantaged children can be minimized. Posed this way, the problem reduces to one of how the children in need of special learning experiences can be best identified and what learning experiences and curriculum programs will best do the job of educating these children.

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[1] Silverman, Susan B., 1965. An annotated bibliography on education and cultural deprivation in Bloom, B. S., Davis, A., and Hess, R., Compensatory education for cultural deprivation. New York: Holt, Rinehart and Winston, Inc.

However, as one gets more deeply into the problem, it becomes evident that the problem becomes more and more complex. First of all, there is no simple means of classifying children as "culturally deprived." Each child varies from every other child and our classifications represent crude methods of grouping which probably hide more than they reveal. Likewise, there is probably no single curriculum which will meet the educational needs of all culturally deprived children. Finally, the research problems are intricately interwoven with the social problems. Solutions to the problems of "how to do it" must be related to the problems and attitudes of parents, teachers, administrators, and the community at large.

One way of viewing the problem of cultural deprivation is to trace the development of individuals from birth to maturity. This approach would delineate the processes at work at each stage or level of development that lead some children to be viewed as culturally deprived while others are seen as either not culturally deprived or as having lesser degrees of cultural deprivation. While this way of posing the problem may be a very fruitful one, it does not become immediately apparent what observations, measurements, evidence, etc. should be gathered at each stage. Nor, is there likely to be very quick solutions to the educational problems of these children if we must await the results of longitudinal studies. It is to be hoped that approximations to such developmental research can be found by reviewing longitudinal data already available and by cross-sectional and normative studies which can be compared and related to each other to secure at least a crude type of developmental picture.

Another way of posing the problem is to create a model of the "normal," "typical" etc. development of the individual and to compare culturally deprived as well as other children with such models and normative indices. There is already in the research literature a great many such comparisons, especially for children in the schools. The evidence of a "cumulative deficit" in cognitive development emerges very clearly from such studies. It is the early years of the child's development that have been crudely sketched out by some of the more recent investigations and especially here do we need a clearer understanding of the processes and stages in development. It is here where we need to create clearer models of development which are supported by theory as well as evidence. Such research and conceptual development will require the efforts of many disciplines and many different techniques and methods. It must involve affective as well as cognitive development, it must determine the interactions between the individual child and the environmental forces around him, and it must attempt to understand how each type and level of development is sequentially related to earlier as well as later development, as well as how concurrent developments are interrelated.

Another way of viewing the problem is to use various theories and conceptual schemes to provide insight into the problems, needs, and educational requirements for particular groups of children. Here theories about psycho-social development, cultural anthropology, learning theories, sociological theories, etc. are all useful in raising questions, providing hypotheses, and suggesting research designs and research methods. This way of approaching the problem is likely to provide many fruitful leads to research as well as to suggest many practical approaches to the educational action programs which are necessary. (This is the approach taken in Section 2.)

Another way of viewing the problem is to secure as many research questions, suggestions as to practical efforts, and leads to investigation as possible and then determine which of these are likely to be most promising and which are likely to yield the least pay-off. (Essentially, this is what our Section 3 represents.) We have grouped these suggestions and hypotheses into such categories as home environment and social class, language, cognition and learning, etc. These categories are useful because much of the literature and previous research make use of such terms. Furthermore, the placing of research questions in such categories helps us to discern relationship among the questions as well as some of the possible relations between these questions and the theoretical and methodological approaches which have been used in the past.

In our efforts to get a comprehensive picture of the research problems of education and cultural deprivation, we have identified a number of variables which we believe must be studied in depth: These include:

1. The student - How does his development at one stage influence his later development - especially his school learning. How and when can earlier developments be altered in desired ways by later developments? How can inadequacies be prevented in cognitive development?

2. The home environment and peer group - How do various conditions in the home and peer group influence the development of the child? Which of the conditions can and should be altered and how can this be accomplished? How can other environmental conditions prior to and during the school stages be related to the home environment and peer group?

3. The learning task - What are the learning tasks of the school and how may these be analyzed in terms of the sub-tasks and their interrelationships? What is the sequence of learning tasks and what are the prerequisites of these tasks? How can diagnostic procedures be used to relate the child's development and characteristics to the learning tasks?

4. The teacher - How do the characteristics of the teacher affect the learning and development of the child? How can teachers be identified who will be of greatest help to the child? How can teachers be trained so as to be of greatest help to the child?

5. School organization - How does the school organization affect the learning and development of the students? What organization of the school will most effectively contribute to the development of the children? How can the organization and personnel of the school best relate to the child, his parents, peers, teachers, curriculum, etc.?

6. Community - How do other organizations in the community affect the development of the individual? How can the school best relate to these other community organizations and facilities to promote the long-term development of the student? How do the values, policies, and practices of the community (social agencies, government, business and industry, community ecology, etc.) affect the long-term development of the student?

7. Society - How do larger social forces such as industrialization, urbanization, legislation, the courts and police, and social movements relate to the development of the individual? How can changes in these larger forces be related to the larger values and issues of the society?

Research Strategies

It should be evident that the research problems of education and cultural deprivation do not neatly fit into simple categories of disciplines and methods. Crude notions of basic and applied research or theoretical vs. action research do not serve us very well when related to the vast range of problems posed by cultural deprivation and its prevention or amelioration by education.

If our society could wait for several decades to have these problems solved, it is quite possible that the normal course of research and action programs could do the job adequately. There is a keen interest in these problems and over a long period of time it is likely that we will better understand the problem and its treatment than we do now. However, the problems of cultural deprivation become increasingly dangerous to the welfare of our society--particularly as changes in industry and economy reduce the likelihood of employment for culturally deprived individuals. If large groups of individuals are barred from sharing in the material as well as non-material benefits of the society by reasons of education and training, they will constitute an ever present threat to the society. There are other more humanistic reasons for solving problems of cultural deprivation such as full participation in the political life of the nation, realization of one's potentialities for growth and development, and the larger goals represented in the phrase "life, liberty, and the pursuit of happiness."

It is strongly urged that the problems of Education and Cultural Deprivation be viewed as the pressing concerns of the schools of the nation, of the government, and of the professional and technical personnel who are in any way related to these problems. At the research and action level it is suggested that the models of the space program and the atomic energy program be used to create a program which will have highest priority in funding and which will stimulate many able persons to participate.

It is urged that a national program of research and development be organized so that many individuals and organizations can participate in all its phases. This would require that large funds for research and action programs be available. It would require the development of procedures to facilitate communication and coordination of much of this work.

It is recommended that a special set of funds be made available for such a program. Some portion of these funds should be set aside for the employment of co-ordinators who could bring particular groups of workers together to enable them to plan their work jointly, and to co-ordinate their research procedures in such a way as to take advantage of the availability of common instruments, sampling procedures, and data processing equipment. Such groups will wish to make use of particular specialists and consultants at various stages of their work. Undoubtedly, communication will be easier and more productive within particular specialist groups (i.e., educational psychologists, anthropologists, reading experts, etc.). From time to time, there may be value in bringing more heterogeneous groups together.

The advantages of a large co-ordinated research program would be very great if it can be executed without impairing the initiative, freedom, and energy of the individual research worker. In addition to finding useful solutions more rapidly than would otherwise be possible, such an approach should help us find ways in which the behavioral scientists (including educators) can cooperate in the attack on the significant social problems of our times. In the long run some of these problems may be of even greater consequence to our society than the problems of education and cultural deprivation.

SECTION 2

Approaches to the Analysis of Problems of Education and Cultural Deprivation

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A Note on Some Conceptual Relations

by

J. W. Getzels
The University of Chicago

What struck me perhaps more than anything else about the Conference was the number of levels at which discourse seemed to go on simultaneously. Consider, for example, three of the most frequently used terms: value, expectation, need. At one time one heard reference to the child's values, the child's expectations, the child's needs, as if the referent of these several terms was the same--something within the child--perhaps synonymous with attitude, motive, or disposition. At another time, one heard reference to the values of the culture, the expectations of the role, the needs of the institution--now the referents were obviously quite different. But it wasn't clear how these terms were related to each other--if indeed they were related--or how the one usage was related to the other. Is what is being referred to the same when one says the expectations of the child and the expectations of the role?

Or consider what seemed to me the generally futile discussion about naming what we were talking about--whether "culturally deprived" was an appropriate term. How can anyone be culturally deprived, it was asked. Doesn't every child have a culture, a set of values? But here again it was the level of discourse that was confusing. The term culturally deprived is perfectly serviceable if it is assumed that there is a normative or dominant middle-class culture, for then it may be said quite logically that some children are deprived of experience with this culture (not all culture). From this point of view, the middle-class child is also culturally deprived--deprived in relation to the values of another culture. Value or culture deprivation is a relational not a quantitative term--the lower class child can have as many values as the middle-class child. In brief, culturally deprived does not mean deprived of all values, it means deprived of the dominant middle-class values, and in the particular case under consideration at the Conference, of the values and experiences needed to get along in a particular segment of our social complex--the school.

Some did not seem to think of the term culture as "a body of beliefs and values constituting a distinct social complex" but tended rather to give it the more common meaning of "the intellectual and artistic content" of a social complex. In this latter sense, we may say that a person is "cultured" when he is intellectually and artistically cultivated and that he is "not cultured" or "culturally deprived" when he is not intellectually and artistically cultivated. But even so, the term culturally deprived again does not mean deprived of all intellectual and artistic content--was, for example, the early illiterate jazz musician or folk singer less creative than today's performer of this music?--but deprived of a particular intellectual and artistic content, a content which may again be described as normative or dominant in relation to other contents. It is in this sense once more that we may speak of certain of our children as culturally deprived i.e., of not having had the same advantages in certain intellectual and artistic experiences at the time they came to school as have other children. (I am not of course arguing that

a better term than culturally deprived cannot be found--I am trying to indicate that a number of ambiguities can be done away with by some attention to the referents of the terms we use.)

To go back to the use of such terms as "expectation." One may surely speak of the child's expectations: the anticipation that if I do this, that will happen. But this is a very different usage from role expectation. In the latter case, the term refers not to an anticipation but to a set of prescribed rights and obligations, so that a child in a certain status, say as a pupil, has a <u>right to</u> certain things and is <u>obligated for</u> certain things. There is nothing wrong in using the term in either way--provided one realizes he is talking within two different conceptual levels, the one deriving from sociological role theory, the other from psychological cognitive (or expectancy) theory.

What seems to me needed then, at least as a point of departure for further clarification, is a scheme by which the various terms which seem to be used rather casually as to referent and interrelation may be given some precision and relational meaning within a single framework.

Now as might be expected (cognitive theory expect) I happen to favor a particular framework. This does not make it right, nor does it even imply that there is not a better one. I just happen to find this one useful, and it has some advantage in that it is already in the literature (see, for example, J. W. Getzels, "Conflict and Role Behavior in the Educational Setting," in Charters and Gage [eds.] <u>Readings in the Social Psychology of Education</u>, Boston: Allyn and Bacon, 1963, pp. 309-318). In any event, let's see how this might help to clarify terms and conceptual relations in the domain under discussion.

We may begin with a number of assumptions, just to be explicit as to what we are about:

1. A fruitful way of conceptualizing the social environment, i.e., the milieu within which we may see the child and the school, is as a <u>system</u>. We shall mean no more by this than that the various components of the environment--political, economic, artistic, educational, etc.--are interrelated so that an alteration in the one necessarily induces alteration in the others.

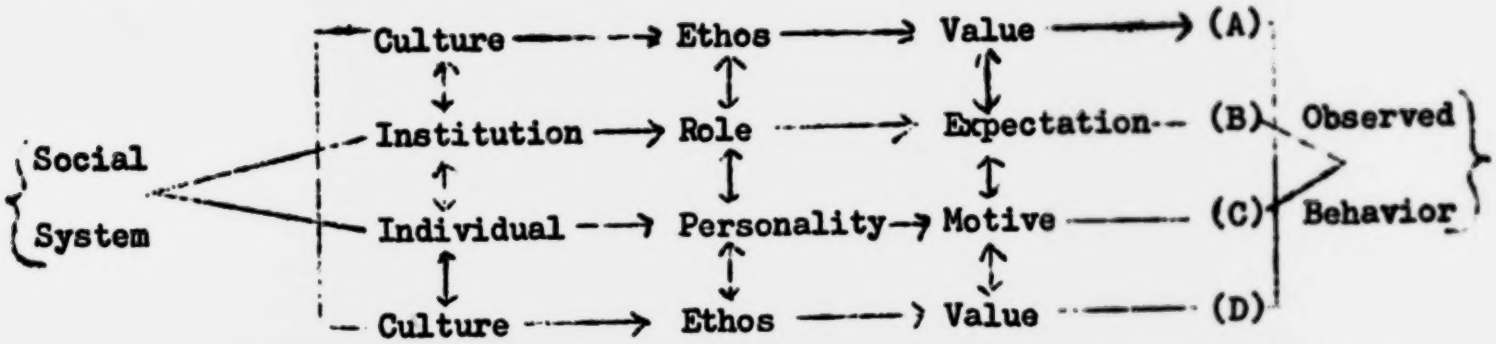
2. The "system" may be studied with respect to a number of quite arbitrary analytic elements--e.g., culture, as the anthropologist predominantly does; institution, as the sociologist predominantly does; individual personality, as the psychologist predominantly does.

3. Although each of these levels from the most macroscopic (culture) to the most microscopic (individual personality) may legitimately be studied in its own right, there are certain advantages (albeit concomitant serious disadvantages) in studying them interrelatedly.

4. One way of doing this--by no means the only way--is to assume culture as the most general context, and focus on the interaction of institution and individual as a manageable unit for conceptual and empirical analysis, both institution and individual being related to the culture.

5. The basic units of analysis--cultural value, institutional role expectation, and individual need or motive--may then be given operational definition and the relationships among them examined.

In outline form, here is the model resulting from the preceding assumptions:[1]



In the terms of <u>this</u> model of the relations between cultural value, institutional expectation, and individual motive, this is the situation approximated for the majority middle-class child with reference to the school as a social institution:

A = D, i.e., the culture within which the child is socialized, and the culture which is the context for the institution tend to be congruent.

D = C, i.e., the motives that are internalized and the values of the culture tend to be congruent.

A = B, i.e., the expectations of the institution and the values of the culture tend to be congruent.

B = C, i.e., the expectations of the institutions and the motives of the individuals tend to be congruent.

In a well-functioning system the cultural values are internalized through the process of socialization by the individuals in the system and become motives within the personality in the form of attitudes and needs, and the expectations of the roles in the social institutions are defined in relation to the same values so that what is required for role performance is congruent with the values of the culture and the motives of the role incumbents, since the motives are also aspects of the values. This situation leads to functional behavior--functional in the sense that what the cultural values require, the institutional expectations include, and the individual motives make attractive in the form of personalistically preferred behavior.

Consider now the case where the values and experiences that are available during socialization are not the same as those which serve as the context for the institutional expectations. This is the situation approximated for the minority lower-class child with reference to the school as a social institution:

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[1]Adapted from J. W. Getzels, "Conflict and Role Behavior," in Charters and Gage (eds.), <u>Readings in the Social Psychology of Education</u>, Boston: Allyn and Bacon, 1963, p. 312.

A ≠ D, i.e., the culture within which the child is socialized and the culture which is represented in the institutional expectations tend to be incongruent.

D = C, i.e., the motives that are internalized and the values of the culture tend to be congruent (N.B. the culture here is the minority lower-class culture).

A = B, i.e., the expectations of the institution and the values of the culture tend to be congruent (N.B. the culture is the dominant middle-class culture).

B ≠ C, i.e., the expectations of the institutions and the motives of the individuals tend to be incongruent.

The situation here leads to dysfunctional behavior--dysfunctional for the culture, the institution, and the individual--i.e., from the point of view of the cultural values and experiences represented in the institution.

The model points to a number of fulcra at which influence can be exerted to change the dysfunctional aspects of the current situation and to a number of issues for empirical investigation. It is, for example, clear that the trend toward compensatory pre-school experiences for the culturally deprived child is an attempt to bring the culture and experiences within which the child is socialized (D) into greater congruence with the culture and experiences within which he will be educated (A). An issue for study here might be whether it is the values or the intellectual contents (if the two can be separated) that are more critical in the compensatory experiences provided in the pre-school years. But on this, more some other time.

This note is an attempt at clarifying a number of concepts that tend to be used rather indiscriminately and to inquire how they might be related to each other systematically. It is in no sense intended as a final statement but rather, as we have said, as a point of departure for further discussion should anyone be so minded.

One Proposal for Research on Culturally Deprived Children

by

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So-called "culturally deprived" children constitute a substantial proportion of the urban school population. The vast bulk of slow learners, school failures, and drop-outs come from this segment of the population. One of the major responsibilities of public education is to raise the level of educability of these children.

Some of the measures that might lead to improving the educational situation for culturally deprived children are suggested by recent theory and research concerning the nature of learning abilities and educational potential. The gist of this view is that most forms of learning beyond the first two or three years of the child's life depend upon transfer from "prerequisite" habits and skills. To the extent that the child does not acquire these prerequisites to each new stage of learning, he is handicapped when confronted with new learning tasks.

We already have a good deal of evidence that lower-class children enter kindergarten or first grade with fewer of the prerequisite skills for the kinds of learning expected by the school in the primary grades than does the middle class child. Some of these deficiencies are in the perceptual realm--the visual and especially the auditory. But their deficiencies are largely in the realm of language development. Our research in the past two years, as well as the findings of other investigators, has shown an intimate relationship between verbal behavior and learning ability, even for nominally non-verbal kinds of learning. We have also found that lower-class children, by the time they enter school, have failed to acquire certain verbal habits which are known to facilitate learning. When these children are provided with the appropriate verbal mediators for a particular kind of task, their rate of learning in the experimental situation improves from a level characteristic of the mentally retarded to a level commensurate with that of average or even, in some cases, of "gifted" children.

The research at this stage would focus on three aspects of the problem:

1. First, we need an adequate psychological description of the perceptual and learning abilities of culturally deprived children as compared with middle-class children. This does not mean a description in terms of IQ or other traditional measures of past achievement, but rather the assessment of learning by means of laboratory techniques that pinpoint the nature of the individual's learning difficulties. One aim of this research would be the development of diagnostic methods capable of differentiating retardation due to cultural factors from retardation having a more fundamental, neurological basis.

2. The second aspect of this research would consist of relating the findings derived from the analyses suggested above to the "task analysis" of school subjects or the demands of the school situation, with the emphasis on the kindergarten and primary grades. It is probable that it is in these grades that the initial failures of lower-class children occur, resulting in the inadequate mastery of the prerequisite skills for subsequent school learning. The roots of this "cumulative deficit" in the education of lower-class children must be discovered in the earliest stages. I would propose doing this by the application of a method known as "task analysis"--the analysis of a given short-term educational goal in terms of the prerequisite subskills that must enter into the achievement of this goal.

3. The third aspect of this research would consist of developing preschool and primary grade educational methods for providing culturally deprived children with the prerequisite subskills needed for a good start in school. It must be emphasized that it is not yet clearly known just what these prerequisite behaviors are, or how and when they can be most effectively inculcated. These are clearly problems for future research.

This whole problem is one of education's greatest challenges. Furthermore, it is an area in which the applied psychology of learning can make a contribution of great social significance. I have been pursuing this line of research for the past couple of years and intend to continue doing so, hopefully on a much larger scale in the future. The theoretical basis in the psychology of learning for this endeavor has been spelled out in detail in my chapter entitled "Social class and verbal learning," in Social Class, Race, and Psychological Development, edited by M. Deutsch and T. F. Pettigrew (Society for the Psychological Study of Social Issues, in press).

One Approach for Analyzing Conceptual Utility of Culturally Deprived

by

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The task of developing certain generalizations and hypotheses concerning the conceptual development of culturally deprived children led us to suggest a type of system or model that could be used as a reference point and could provide for the generation of hypotheses. The model symbolized below represents one way to characterize conceptual utilization or the functioning intelligence of the child. The virtues of such a model lie in creating a thinking set and in suggesting testable hypotheses rather than in its essential validity.

The development of the conceptual network of the individual is presumed to depend upon complex multivariate relationships with a large number of different forces operating to influence the final result.

$CU \rightleftarrows f(S_e, N_p, P, M, A, \ldots N)$

CU = Conceptual Utility

S_e = Range of Stimulation

N_p = Satisfaction of Physical Needs

P = Perceptual skills

M = Presence of a mediating linguistic coding system

A = Attitude or set towards learning

There are several implications of this system that should be noted. All of the dependent variables may interact with one another in complex patterns. It is possible that a very strong positive valence in one dimension may cancel out negative forces in some other dimension. Thus, a limited range of stimulation can be overcome by a high positive weighting on attitude or set towards learning.

It is also possible for certain dependent variables to be highly weighted in some individuals and not at all in others. Those dependent variables represented here are only a few of a large set of variables that can influence conceptual utility and the rest of the set not noted (and possibly still unknown) is represented by '...N.' The term conceptual utility (CU) refers to the ability of the individual to assign problems to the individual's storehouse of concepts or to the total conceptual network of the individual and to be able to rely on that system to advance a solution to that problem. In simpler terms, it can be referred to as useful intellectual ability. The double arrow in the schematic representation is a recognition of the interplay of forces. Not only do changes in the variables on the right side of the

formula influence Conceptual Utility, but growing skill in conceptuality can also influence individual variables such as attitude or set towards learning.

Some of the presumed relevant variables toward the strength of conceptual utility fall outside the individual while some are internal and represent developmental aspects of conceptual growth. For example, S_e represents the range of stimulation available to the child. Dave,[1] Wolf,[2] and others have studied the impact of a relatively barren stimulus environment and have suggested it is related to limited conceptual utility.

N_p stands for satisfaction of physical needs and would be based on the theoretical hierarchy of needs such as presented by Maslow[3] which suggests that if the individual is placed in a situation where most of his energies are consumed satisfying basic needs that little time or energy is left over for the satisfaction of more abstract intellectual needs. Therefore, the greater the unmet needs at the more basic levels of the hierarchy, the less one can expect full development of the more abstract levels of intellectual and subtler social needs. The concrete jungle is a poor place for the development of flower arranging, composing minuets, or discussions on the true meaning of Joyce's works.

Perceptual skills (P) are distinguished from conceptual responses in terms of whether the overt discriminative response is made to the external stimulus or is made to other mediating responses, which are generally of an overt or covert verbal nature. Such skills as closure, perceptual discrimination, ability to see figure ground relationships, etc., are represented under this general heading. There almost certainly is a relationship between these perceptual skills and the range of stimulation (S_e) in early years of the child's development that play an important but uncharted role in later conceptual utility.

The relative simplicity of the basic formulation noted above is due to the fact that many of the variables listed as individual characteristics (such as M, A, etc.) have in their own turn, many forces or factors operating on them. For example, the factors surrounding the development of the mediating linguistic coding system provides a natural focus for further research. It appears that its development in turn, can be portrayed as follows:

$$M \longleftarrow f(A_s, A_f, P_s, P_f, CM, \ldots N)$$

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[1]Dave, R. H., 1963. The identification and measurement of environmental process variables that are related to educational achievement. Unpublished Ph.D. dissertation, University of Chicago.

[2]Wolf, R. M., 1964. The identification and measurement of environmental process variables related to intelligence. Unpublished Ph.D. dissertation, University of Chicago.

[3]Maslow, A. H., 1954. Motivation and personality. New York: Harper and Row.

A_s = Adult stimulation (linguistic) of coding system in terms of being a model for labeling and classification.

A_f = Amount of adult feedback provided to the child's own attempts to use a linguistic coding system.

P_s = Peer stimulation in terms of rewards for utilizing the coding system.

P_f = Peer models and feedback

C_m = Mass communications such as TV which would provide other models for performance.

In short, the development of a linguistic coding system is facilitated by an adult model who cares about the development of such a system in the child. The style of linguistic patterns are also shown in type of parental models (Bernstein).[4] The feedback in particular seems necessary in order to sharpen the ability of the child to further conceptual differentiation and integration (i.e., 'No Johnny, that is not a horse, it is a mule.') (See Casler[5]; John[6]; Deutsch[7]).

The comparative absence of adult models and the influence of the peer society, as seen in informal groups and gangs, underlines the important role played by that segment in the type and kind of linguistic coding system developed (Maas,[8] Marshall and McCandless[9]). The differing proportions of time spent with adults and peers may influence not only the amount of language absorbed but the kind of linguistic patterns rewarded or modelled (Bernstein, 1962, op. cit.).

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[4]Bernstein, B., 1961. "Social class and linguistic development: a theory of social learning," in Halsey, A. H., Floud, J., and Anderson, C. A. (Eds.), Education, economy and society. Glencoe: Free Press; Bernstein, B., 1962. Linguistic codes, hesitation phenomena and intelligence. Language and Speech, 5 (1), 31-46.

[5]Casler, L., 1961. Maternal deprivation: a critical review of the literature. Soc. Res. Child Develpm. Monogr., 26, No. 2.

[6]John, Vera P., 1963. The intellectual development of slum children: some preliminary findings. Amer. J. Orthopsychiat., 33, 813-822.

[7]Deutsch, M., 1963. "The disadvantaged child and the learning process," in Passow, A. H. (Ed.), Education in depressed areas. New York: Teachers College, Columbia University, 163-180.

[8]Maas, H. S., 1951. Some social class differences in the family systems and group relations of pre- and early adolescents. Child Develpm., 22, 145-152.

[9]Marshall and McCandless, 1957. Relationships between dependence on adults and social acceptance by peers. Child Develpm., 28, 413-419.

A relatively new factor in the development of a linguistic coding system is the presumed impact of mass communications media (C_m). These media emit a constant flow of language and provide an exposure to linguistic patterns and style not otherwise available to the educationally disadvantaged child.

Another of the key variables noted in the model of conceptual utility is that of learning set or attention. The development of such a set again depends on numerous other factors. The concept of learning set (A) is central to the willingness of the individual to undergo frustration and to delay immediate gratification in order to add to his conceptual network (LeShan[10]). Such willingness would seem to come initially from social needs within the family and later in joy of learning or adding to his own sense of mastery through the organization of new material.

$$A \longleftarrow f(R_i, R_f, R_m, S_p, E_m, \ldots N)$$

R_i = Reinforcement for attending to learning task

R_f = Reinforcement learning through statement of future goals

R_m = Reinforcement of learning through the presentation of desirable adult model.

S_p = Amount and range of past stimulation absorbed and organized

E_m = Feelings of mastery and personal accomplishment

Ri - Immediate Reinforcement for Attention

Immediacy has two dimensions, time and tangibility. Mediators serve to close gaps in time and to make more tangible the intangible. Optimal learning in unfamiliar situations is a function of the closeness in time between an act and the reception of the reward (Jensen[11]). This closeness in time relation between the child's perceptual or conceptual act and reinforcement is probably dependent upon the presence of a parent, a sibling or a peer who is (1) aware of the relation--adequate or inadequate--between the perceptual or conceptual act and its prompting stimuli, (2) has a critical, judging attitude toward the child's percept or concept, and (3) delivers feedback which (a) halts inadequate behavior, either gives a model for adequate behavior and elicits and rewards that behavior, or (b) reinforces adequate behavior. Of critical importance is the nature of the standards of perceptual or conceptual adequacy. If these are consistent with either school standards or the requirements of school tasks, then the fruits of reinforcement will be reaped. There

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[10] LeShan, L. L., 1952. Time orientation and social class. J. Abnorm. Soc. Psychol., 47, 589-592.

[11] Jensen, A. R., 1963. Learning ability in retarded, average and gifted children. Merrill-Palmer Q., 9 (2), 123-140.

is at present no good evidence as to whether or in what ways standards of perceptual or conceptual discriminations differ between social classes.

Tangibility of feedback (i.e., money, toys or affection as compared to verbal statements of right or wrong by an inaffectionate person or machine) is necessary for children who cannot, or who do not use inner speech to mediate between their response and future satisfaction (Zigler and DeLabry[12]). The experience of logistical difficulties of continued dependence on tangible reinforcers argue for the necessity of the development of both the techniques and the tendencies of mediation if the learner is to be able to progress in the present kind of scholastic program.

R_m and A_f - Future Orienting Model and Reinforcement

One of the implied techniques of mediation is that type of inner speech in which the child talks to himself about the consequences of his perceptual and conceptual acts. This mediational inner speech connects some future affect-laden condition, in which he imagines himself, to present behavior.

Necessary conditions for this mediation are (1) direct, non-mediated association with an appealing personal model who symbolizes possible future attainments, (2) experience in which significant adults have verbally expressed or clearly implied the possibility and desirability of emulating the model person, and (3) a reinforced connection between present perceptual and conceptual acts and being like the model person (Empey[13]; Galler[14]).

The absence of fathers who serve as models of competence and models of persistent, distant-goal oriented behavior, and the presence of older, 'present-oriented' peer models militates against the lower class boy's identity or interest with the future.

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[12]Zigler, E., and DeLabry, J., 1962. Concept switching in middle-class, lower-class and retarded children. J. Abnorm. Soc. Psychol., 65, 267-273.

[13]Empey, L., 1956. Social class and occupational aspiration: a comparison of absolute and relative measurements. Amer. Sociol. Rev., 21, 703-709.

[14]Galler, E. H., 1951. Influence of social class on children's choice of occupations. Elem. School J., 51, 439-445.

S_p - Amount and Range of Past Stimulation Absorbed and Organized

The willingness to attend to novel stimuli is influenced by the amount of past experience with similar stimuli (Hunt[15]). Initial contacts with a new body of stimuli are likely to be approached hesitantly and fearfully by children who need support of a reinforcing adult during this period. Without such support, the child may likely withdraw. This would seem to be the situation with culturally deprived children and their reaction to new educational approaches.

When the child becomes familiar with and obtains rewards from his contacts with a body of information, he will welcome rather than withdraw from the stimuli.

E_m - Feelings of Mastery and Personal Accomplishment

Feelings of mastery seem to have influence on attention and set apart from standard external reinforcement models. The joy of the young child in completing a puzzle or negotiating an obstacle seems to exist independent of possible external reward systems and can serve as a powerful directing force.

Some Research Needs and Directions

Developmental Intellectual Processes

All descriptions of perceptual and conceptual development of the child are based upon an implied or explicit comparison with a presumed developmental schedule of children without deprivation. The sequential development of 'normal' children provides the track upon which we wish to place the derailed deprived child.

Our knowledge of perceptual and conceptual development in normal or atypical preschool children is fragmentary and incomplete to say the least, however. A large scale parallel series of Piaget-type studies of space, time, perceptual discrimination, etc., across both samples would be useful, not only to catalogue this development in the different samples, but also to provide teachers with information on where, and at what level, to begin remedial instruction.

It is axiomatic that the earlier stages of development must be established before the later and more abstract stage of conceptualization takes place. Remedial education must concentrate on diagnostic procedures which identify the level of perceptual and conceptual development and provide a developmental schedule for the teacher's guidance.

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[15]Hunt, J. McV., 1961. Intelligence and experience. New York: Ronald Press.

Orientation to Future

The concept of future vs. present orientation lies at the heart of the here-and-now approach to life of the culturally deprived child. The development of a future orientation in children is probably a function of the predictability of the environment plus the availability of a mediating coding system which enables the child to hold the abstract future in some form of imagery.

The influence of direct training studies on the predictability of nature and physical events such as an emphasis on process (planting of a seed, growing of a flower, etc.) to show meaning and order would be useful studies to explore. NOTE: Piaget's argument that the concept of chance cannot be learned until a concept of order or system has been established.

Does a growing future orientation aid in the establishment of more delay gratification behavior?

Does the teaching of a vocabulary of future terms or the use of 'What would happen if...' or 'Suppose...' questions increase the child's orientation to education which, after all, is highly future oriented?

Does a strict schedule of events improve child's attitude to school in that it provides the security of predictability and order in the child?

SECTION 3

Suggested Research Problems on Education and Cultural Deprivation

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Home Environment, Social Class, and Peer Groups

The home environment has been studied as a means of understanding the factors which influence the development of children. Studies repeatedly show that the home is the single most important influence on the intellectual and emotional development of children, particularly in the preschool years. The peer group and other aspects of the environment become increasingly important as the child becomes older.

The ways in which parents spend time with their children at meals, in play, and other times during the day has been found to be an important factor in developing skills which prepare children for school. The objects in the home, the amount of parental interest in learning, and the amount of practice and encouragement the child is given in conversation and in general learning have been found to be significant influences on language and cognitive development, development of interest in learning, attention span, and motivation of the child.

Most disadvantaged children (with the possible exception of those in rural areas) spend less time in direct interaction with their parents than middle-class children do. In addition, the parents in deprived homes usually do not have the skills or the language to effectively use the time they spend with their children to foster the language and cognitive development which will help the children in school. There is much crowding and noise and children do not have an opportunity to receive corrective feedback when they begin speaking. Toys and other objects which help develop concepts are not readily available or used effectively in promoting learning.

Although parents of disadvantaged children are increasingly becoming interested in seeing their children succeed in school, they do not have the same intellectual and material resources that middle-class parents have to enable them to adequately prepare their children for the school experience. Children from deprived homes, then, come to school with a set of preschool experiences which are different from those of children from middle-class homes, and the expectations of the school do not take into consideration these differences in preschool experiences.

Some of the major problems in this area are:

A) How can the characteristics of the home environment, peer group, and other environmental influences be best measured and described?

B) How do the environments of culturally deprived children differ from the environments of culturally advantaged children?

C) How do the various environmental characteristics influence the child's development and how does this process change as the child develops?

D) What are the effects of various methods of influencing the home and the peer group? Which characteristics of the environment are alterable and which characteristics of the environment are likely to be most resistant to change?

Some of the more specific research questions in this area are:

1) How is the stimulation and early development of the child in the home affected by the larger social system in which the home is embedded? How is the home affected by housing conditions, size of family, socio-economic levels, racial and ethnic nature of the neighborhood, community dynamics, and parental employment?

2) What are the long-term consequences of diet-enrichment of pregnant women who are in dire poverty? Some of the research has demonstrated lasting improvement of the I.Q.'s of the offspring of mothers given massive vitamin supplements during the last half of pregnancy. What other effects can be related to diet-enrichment of pregnant women?

3) What are the dimensions of home stimulation which are related to school achievement, intelligence, motivation, and attitudes of the child?

4) What roles are assumed in the home which inhibit and which facilitate the taking of:

   a) The role of learner in school
   b) The role of follower or leader in peer groups
   c) The role of "loner" in leisure time

5) How do mothers in different socio-economic and cultural groups teach their children in the first three or four years of life? How do maternal teaching styles affect the child's later school progress as well as his life style? How does the maternal teaching style prepare the child for the roles and environmental conditions the child must cope with?

6) What is the effect of father absence on the mother and on the cognitive and affective development of the child?

7) How do the attitudes and views of the older siblings affect motivation and aspirations of younger children?

8) What are the different relations between the home and the peer group and how do these relations affect the cognitive and affective development of the child?

9) How do the peer groups attitudes toward the school and the community affect the school learning of its members?

10) Under what conditions does the peer group take over the early development of the child and what are the socialization consequences of such early involvement with a powerful peer group?

11) What methods can be used to appraise the degree of community commitment and involvement in education?

12) Under what conditions is there likely to be school vs. community alienation? How can such alienation be reduced?

13) What should be the role of the school and other social institutions in affecting changes in the home environment?

14) Which aspects of the home environment are likely to be stable and which aspects are subject to change? What is the role of the school and other social institutions in affecting changes in the home environment?

15) What is the effect of adult education in changing the nature of the home environments?

16) What is the affect of the educational experiences of older siblings and relations on the home environment and cognitive and affective development of younger children?

17) How can successful intervention with older siblings influence other family members?

Language, Cognition, and Learning

Research has documented some of the differences between culturally deprived and culturally advantaged children with regard to perceptual development, language development, and cognitive development. For the most part, these studies demonstrate differences between selected groups of children at particular ages.

Some of the studies have related these developments to particular processes in the home. The observations show that the middle class family is more likely to make use of language in an elaborated way--this includes using language to extend ideas, feelings, and individual interpretations. Language is usually accurate grammatically and allows for many ways of expressing oneself. Spoken language is the most important means of communication in the middle-class family, and children are encouraged to speak and are corrected and reinforced in their language learning.

In the deprived home, language usage is more limited. Much communication is through gestures and other non-verbal means. When language is used it is likely to be terse and not necessarily grammatically correct. In any case, it is likely to be restricted in the number of grammatical forms which are utilized. Thus, the deprived child enters school inadequately prepared for the typical language tasks of the first grade. The greatest handicap seems to be a lack of familiarity with the speech used by teachers and insufficient practice in attending to prolonged speech sequences.

Further research is needed to make clear the precise way in which development occurs in different groups of children, the sequence of particular types of behavior and processes, and the consequences of attempts to alter these developments at different ages.

Some of the major problems in this area are:

A) How can evidence on perceptual, language, and cognitive development be gathered in a more systematic way from early childhood on? How can this evidence be treated in more precise ways so as to yield clearer pictures of the development of the child over time?

B) What are the specific ways in which the development of culturally deprived children differ from that of other children? How does the development of particular ethnic and other groups differ from each other and what are the consequences of the differences for the work of the schools?

C) What is the process and how can the process of development in perception, language, and cognition be explained and summarized? What theoretical and conceptual models and systems can be used to understand this development? How are the different types of development interrelated?

D) Can intervention procedures alter these developments in a significant way? Are there any time and age limits for intervention?

Some of the more specific research questions in this area are:

1) All descriptions of perceptual and conceptual development of the child are based upon an implied or explicit comparison with a presumed developmental schedule of children without deprivation. Our knowledge of perceptual and conceptual development in preschool children is fragmentary and incomplete to say the least. A large scale parallel series of studies of the Piaget type across both samples would be useful not only to catalogue this development in the different samples, but also to provide teachers information on where and at what level to begin remedial instruction.

2) The developmental stages, or sequences, in perceptual skills or in building a verbal mediating system or in the subtle combination of both are not well established. A long range and partially <u>longitudinal</u> study should be considered in following parallel groups of children in 'deprived' and 'normal' settings to grasp the particular developmental defects caused by deprivation.

3) The critical period hypothesis has been related to perceptual and cognitive development of the child. This hypothesis should be tested by the use of laboratory investigations, developmental studies, longitudinal investigations, and other means.

4) Are there critical learning periods in which particular cognitive and affective behaviors are learned? If so, what are the critical periods for particular types of learning? What are the limits and range of individual variability with respect to critical periods?

5) If there are critical learning periods, can particular deficits incurred during these periods be reversed at later times? Are there limits on the time periods in which reversibility can be effected? Are there limits in the extent of reversibility? How are these ideas of critical periods and reversibility related to particular types of learning?

6) What are the processes which create and modify the child's modes of communication? How are these processes changed and modified in relation to the stages and levels in the child's development?

7) What are the dimensions of language and speech which relate to variations in conceptual and discrimination learning?

8) What is the process by which the child's language development is influenced and controlled by the persons in his immediate environment?

9) To what extent does the language development of the child limit and control his cognitive functioning?

10) What kinds of cognitive style seem most appropriate to the development of advanced conceptualization? How is a cognitive style developed? How is it altered? How does the cognitive style at one age relate to cognitive styles at later ages?

11) Do the findings with regard to reduced cognitions hold with a wide spectrum of culturally deprived groups? If so, what are the realistic parameters for learning theorists and for educators? What, specifically is impaired? What types of intervention-remedial situations are clearly indicated?

12) How does a child develop reactions to different reward systems? What makes for differential reactions to tangible and intangible rewards? How can children be trained to respond to intangible and more distant rewards?

13) The delay of gratification or the building of frustration tolerance seems central to successful adaptation to school. Can verbal mediators help the youngster to delay by giving him a present cue to fix concretely the future reward?

Personality and Motivation

Research on personality development in deprived children has not been very extensive. The available evidence, however, does seem to indicate that the ego development of the deprived child is more likely to be characterized by lack of self-confidence and negative self-image than that of the middle-class child. This is particularly true for the Negro deprived child who suffers the additional handicap of caste-like status and prejudice. In the case of males, inadequate sex-role identification seems fairly common. In addition, research on failure (often experienced by these children) shows negative effects on personality and subsequent achievement and aspiration.

Studies of motivation show that many deprived children and adolescents often have unrealistic aspirations. Verbalized educational and occupational goals are often incongruent with actual achievement or training being received. However, on the average, students of lower-social class do have lower occupational and educational aspirations than do upper-status students.

Patterns of future-time orientation and striving for delayed, often symbolic, gratification are much more common among middle-class students than among disadvantaged students; these patterns are seen as necessary for successful academic performance. The motivational patterns of deprived children, particularly present-time orientation and reliance on immediate, often material, rewards are adaptive to their life circumstances, though not facilitative in school. The research on motivation suggests the need for developing school programs adapted to the motivational patterns of these youngsters or for developing methods which will alter these motivational and reward systems.

There is no doubt that the middle-class student is given many tangential gratifications while delaying gratification of the primary goals, while the disadvantaged student may be forced to accept delay in both primary and tangential gratifications. The opportunity structures available to the two groups of students upon graduation are also very different. Research on these very basic patterns of motivation is needed if we are to understand how such patterns of motivation are related to the social realities which individuals face. It is quite possible that the changes in motivations will come about only when the educational system and the social system are congruent in this area.

Some of the major problems in this area are:

A) How can evidence be gathered to determine the ways in which personality characteristics and motivational patterns develop in the culturally deprived as well as other children from the early years on?

B) What are the major differences in personality and motivational development of culturally deprived children as contrasted with other groups of children?

C) How is the process of personality development influenced by the home, school, and peer group? How is this process influenced by prejudice, slum living, and perceptions of social and vocational opportunities?

D) What types of social conditions, educational arrangements, individual and group therapy, and guidance can most effectively promote healthy personality development for culturally deprived as well as other children?

Some of the more specific research questions in this area are:

1) How can we secure firm data on the self-judgments and life-space perceptions of young children and the ways in which these are influenced by particular aspects of the environment?

2) How do self-judgments operate to guide or modify behavior and under what circumstances?

3) What is the impact of negative self-judgments and why do they operate to activate motivation in one situation and to depress motivation in another situation?

4) What is the process by which the positive and negative judgments about an individual (or a group of which the individual is a member) become internalized? How early does this process take place and when and how can it be most effectively altered?

5) What is the impact of class and caste position on the development of adequate self-judgments?

6) How do the family and peer group attachments lead to positive and negative self-judgments in culturally deprived children?

7) What concepts of healthy personality or adequate mental health are relevant to evaluation of deprived children? (Certain behaviors which might be termed maladjusted for middle-class children may be adaptive and functional for lower-class children.)

8) What is the effect of school failure (or the recognition of inadequate learning achievement by the pupil) on the personality and self-image of the child? How does school failure influence motivation for further school learning?

9) What immediate contributions might psychiatric theory make in the effort to provide ego supports to youth identified with weak or negative self-identity? (Develop intervention model(s) with use of psychiatric personnel.)

10) How can experiences of culturally deprived children in the home and school be used to positively contribute to ego development, self concept, and motivation for learning?

11) What types of school programs and teacher-student relations can prevent serious ego damage for culturally deprived children?

12) How can the use of positive role models in the school (male elementary school teachers, parent volunteers, etc.) be used to help children of father-absent homes develop most adequately in ego, self-image, and motivation?

13) The concept of future vs. present orientation lies at the heart of the here-and-now approach to life of the culturally deprived child. The development of future orientation in children is probably a function of the predictability of the environment plus a mediating coding system to enable the child to hold the abstract future in some form of imagery. The influence of direct training studies on the predictability of nature and physical events, emphasis on process (planting of a seed, growing of a flower, etc.) to show meaning and order would be useful studies to explore.

Testing and Diagnosis

Intelligence test scores of deprived children have been found to be lower on the average than those of children from more stimulating environments. The range of scores, however, clearly indicates that there is much overlap in the scores of deprived and middle-class children. The intelligence test scores of disadvantaged children have been found to show a decrease after about age five. This seems to be part of a cumulative-deficit phenomenon which affects both the scholastic achievement and intelligence test performance of these youngsters. Some factors which have been found to lower the intelligence test performance of disadvantaged children are low motivation to excel on tests, weak rapport with an examiner from a different subculture, and certain culture-specific characteristics of the tests, such as emphasis upon speed of performanc

A most striking finding is that the environment of these children causes depression of intellectual functioning, and that the provision of a more adequate environment through preschool and other experiences results in considerable increase (10 to 15 points) in IQ and in more successful school learning. Even short-range training in perceptual skills, following directions, and other tasks has produced marked increases in intelligence test performance. Thus, levels of intellectual functioning have been found to be quite changeable for the culturally deprived and greatly affected by environmental experiences. In most instances it seems correct to assume that the measured intelligence of deprived children does not reflect a ceiling level of their learning ability; however, their full learning ability will be realized only under the proper environmental conditions in the home and the school.

Under the traditional school curriculum, current intelligence and other ability tests do have considerable predictive power. However, the major task of education is seen as the development of learning ability. There are legitimate needs for predictive instruments which can be used for selection and classification purposes, but major emphasis should be on diagnostic and prescriptive techniques which give guidance to the instructional team for corrective purposes. Programs of intervention and curriculum development require as detailed information about the target population as is possible.

The following lines of work in diagnosis and testing have been suggested. They represent attempts at obtaining a much more precise normative picture of the population with regard to variables which have direct relevance to school functions. Although emphasis is on diagnostic tools, there are suggestions for the development of more accurate selection and classification instruments. While these suggestions emanated from a concern with the culturally deprived population, we feel that many of these have much more general applicability.

Some of the major problems in this area are:

A) What types of testing and diagnostic procedures will best reveal the development of the child and will be most functional in helping the school provide the particular learning experiences needed by the child?

B) How do particular groups of children differ in their test performance at different ages and under different conditions and how are these differences related to the tasks of the school?

C) How do children vary in their responses to different tests and how can this variation be explained and interpreted?

D) What aspects of intelligence and aptitude can be altered by particular intervention procedures at specific ages and levels of development?

Some of the more specific research and test construction problems in this area are:

1) In order to study the early development of the child, there is a need for a battery of instruments which can be used for children at ages 2 to 6. Such a battery should include measures of auditory and visual perceptual development, language development, and conceptual development.

2) There are a number of specific characteristics which may be summarized under the concept of "learning to learn." Many of these characteristics appear to be associated with particular types of child training procedures. Instruments are needed to measure these "learning to learn" variables. They would probably include such characteristics as attention span, task orientation, role conception, use of adults as resources, responses to different types of rewards, etc.

3) The term "cultural deprivation" and other related terms are not clear or operational. What is needed are a series of instruments which:

   a) Distinguish between retardation due to biological factors and retardation due to psycho-social factors.

   b) Distinguish between present level of measured intelligence and potential level of intelligence under more favorable conditions.

   c) Measure particular aspects of the home environment that influence intelligence and learning and distinguish between alterable and non-alterable aspects of the home environment.

4) The effects of intervention and compensatory education can be appraised more adequately if batteries of instruments are available at particular critical periods to measure the child's educational development in such a way as to indicate both the level of development the child has reached as well as his particular learning needs for the future. Such instruments should measure school-oriented aspects of intellectual development as well as changes in interests, attitudes, and values relevant to school functioning.

5) Evaluative and diagnostic instruments are needed to appraise the child's needs with respect to particular educational tasks. A type of task analysis (in reading, arithmetic, language, etc.) is needed as a prerequisite to construction of such instruments. The instruments should help teachers relate learning experiences to the specific aspects of the task needed by each child (or group of children).

6) Closely related to the development of instruments is the need for more effective data recording and processing procedures which help teachers and administrators follow the child's development over time and relate such development to his educational needs.

7) Selection and classification procedures are needed at the beginning of the junior and senior high school level and at the end of secondary school which will more adequately reveal abilities and achievements of culturally deprived students. Such instruments should reveal needs to be taken care of by learning experiences as well as the types of educational and vocational guidance to be given the individual.

8) Further research is needed on instruments and criteria used at present. Some of the questions to which this research should be addressed are:

   a) Do conventional tests predict academic achievement of culturally deprived groups as well as other groups? Do the predictive value of the instruments differ for segregated and integrated school situations?

   b) How do such test characteristics as validity and reliability differ for particular culturally deprived groups, in contrast to the normative sample, for instruments widely used in the schools?

School Programs and Personnel - Curricula

A number of experimental school programs for deprived children at preschool and later school levels have been initiated recently. Results of many of these programs are encouraging and indicate that curricula can be developed which can overcome many of the deficits which deprived children have. Preschool projects which emphasized development of attentional skills, language usage, concept formation, development of future-time orientation, and other readiness skills have shown promising results. Marked increases in intelligence test scores have been clearly demonstrated in these preschool programs. It seems very likely that youngsters who have had such preschool experiences will be much more ready for the usual elementary school program, although reports of performance in elementary schools of children who have been through preschool programs are still not available because these projects are so recent.

Projects during elementary school and junior high school have also been initiated and results reported. As in the case of the preschool programs, improvement in the performance of these children was achieved when the curricula and materials were adapted to the children's levels of readiness and when they provided the skills and experiences which the children lacked. As would be expected in light of the cumulative-deficit phenomenon, more effort and expenditure is required to help children as they become older. However, even at the junior high school level some success has been reported in raising achievement and aspiration levels of selected youngsters from low-status homes.

Further research is needed to determine the effectiveness of many experimental curricula which have been devised for culturally deprived children. This research should determine the short term as well as long term consequences of these programs and should emphasize both cognitive as well as affective outcomes of these programs.

What is especially needed is a national curriculum program which will devise curricula and materials which can be used in the schools at all levels from the nursery school to the secondary school level. Such programs should draw upon the skills, experience, and insights of teachers, child development specialists, educational psychologists, sociologists, and other specialists who have been concerned with the learning problems of these children. In addition, evaluators and research design specialists must play their role in the experimental work with these new programs.

Some of the major problems in this area are:

A) The construction and tryout of a number of major new curricular programs which deal directly with the specific learning problems of culturally deprived children.

B) The identification of specific curricula and teaching styles which are most effective in reducing achievement differentials between culturally deprived and other students.

C) The development of theoretical and conceptual schemes which can serve as the basis for curriculum construction for culturally deprived children. Such schemes should also serve as a means for analyzing existing curricula.

Some of the more specific research problems and curricular needs in the area are:

1) A task analysis should be made of particular goals of education (e.g., learning to read, arithmetic, language development, etc.). Such a task analysis should be a prerequisite to the development of curricular programs for culturally deprived as well as other pupils. (A good model for this is the type of task analyses made by training psychologists, such as Gagne and Paradise.[1])

2) There is a need for research on the development, in the preschool years and primary grades, of educational experiences designed to provide lower-class children with the perceptual and cognitive bases for school learning.

3) There should be experimentation with all-day nursery schools with a specific curriculum to advance the prerequisite skills for school learning. It should not be an unstructured playtime although experiences in socialization will be a by-product as will be the effects of the presence of good language models.

4) Curriculum development projects should be encouraged which would translate the curriculum goals of the schools into the idiom of the minority culture. (E.g., knowledge of conflict in history can be made more meaningful through reference to conflict in their own environment.)

5) There is need for studies of the efficiency of various instructional techniques for different configurations of deficit, e.g., 1) the use of Skinner-type learning programs to maximize immediate reward; 2) the use of achieving role models for deprived Negro boys from father-absent homes as it affects self-esteem, academic performance, sex-role identification, etc.

6) Although certain generalizations can be made regarding patterns of development and strengths and weaknesses of deprived children, it is very likely that within-group variability is high. A number of curricula based on different patterns of readiness within this group of children should be developed and tested.

7) Special teaching machine programs tailored for special segments of the culturally deprived should be developed and evaluated. Most development work on these programs so far has been aimed at the gifted; yet the immediate reinforcement, tangible reward, carefully sequenced nature of teaching machines - when combined with astute and sympathetic human encouragement - seems especially well suited for the culturally deprived.

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[1]Gagne, R. M., and Paradise, N. E., 1961. Abilities and learning sets in knowledge acquisition. Psychol. Monogr., LXXV, Whole No. 518

8) In an environment marked by crisis, chaos, and instability a child is less likely to see order or to think about future concerns. Can this 'present oriented' child be trained to a more future orientation by 1) the introduction of a rigid and predictable schedule in the educational setting, 2) direct discussion of future vs. present goals--i.e., discussion of what we will do tomorrow or trip to be taken next week or by 3) giving a vocabulary to the child with which to discuss such distant goals?

9) In view of differential reactions to reward systems, what changes could be introduced at the beginning grades of elementary schools to encourage learning? Would tangible (even monetary) rewards be more appropriate than intangible ones? At what ages can the switch from tangible to long range rewards be made?

10) What are the effects of a "guaranteed future" on school performances of culturally deprived children? Longitudinal research on a parentally-volunteered group of "normal" children who by 3rd or 4th grade are told that they have guaranteed college scholarships (providing they pass their work in school). This information is also given teachers. Research would observe, compared to controls, how this intervention changes behavior and expectations of children, parents, and schools, and how these changes relate to school performance. (This idea was originally put forward by Dr. Paul Shay, of Harvard University; and Tufts University has agreed to guarantee such scholarships for 20 to 25 children.)

11) Since negative identification of boys seems to imply the internalization of feelings of negative self-worth given by matriarchal or matrifocal family heads--a reversibility study should be carried out on preschool youngsters from such families. Large doses of physical affection by teacher should be given and a series of tasks at or below the child's developmental level presented that would emphasize feelings of self mastery. Much individualized attention necessary here.

12) A systematic review, application, and evaluation of armed service and industrial teaching techniques used in such crash programs as World War II's special training units for illiterates. Necessity is indeed the mother of invention; and the manpower shortage of the early 1940's led to the development of numerous imaginative techniques for crash training which were specifically designed for the most disadvantaged segments of the American population and potentially could be of great use in our schools today.

School Programs and Personnel - Teachers

One of the special problems of the schools is to secure teachers who can effectively work with culturally deprived children. There is considerable evidence that teachers at present have difficulty in working with these children and there is much movement of teachers out of "slum" schools. The special needs of these children require special curricula. Teachers are needed who can use these special curricula as well as understand and help solve the particular learning problems of these children.

The major problems which research and action programs must deal with in this area are:

A) How can capable and dedicated teachers be identified and attracted to work with culturally deprived pupils?

B) How can teachers best be trained (pre-service as well as in-service programs) to deal with the special learning problems of these children?

C) What types of incentives will result in capable teachers continuing to work with culturally deprived pupils?

Some of the more specific research questions and suggestions are the following:

1) Assuming that in educationally deprived areas the task of the school is to resocialize, in what ways are the teachers prepared by teacher training institutions for resocializing roles?

2) What program of courses and training in teacher education institutions will most effectively prepare teachers for work with culturally deprived children?

3) What methods might be employed to assist in-service teachers to become more sensitive and responsive to the special needs of culturally deprived children? (Develop and test out human relations and human dynamics activities. Determine the effects of special training in sociological and psychological factors relating to these problems and the effects of training on educational methods and techniques for culturally deprived children.)

4) How can teachers be identified who have a strong commitment and involvement in the education of culturally deprived children? How can the probable effectiveness of such teachers with these children be predicted?

5) Research directed at determining the characteristics, formal training, attitudes, etc., of teachers who would be most effective in working in integrated schools. It is important to differentiate between teachers employed in elementary, as opposed to secondary schools. (In terms of recruitment and selection, we might do well to look at Peace Corps volunteers, as they perhaps possess the types of characteristics or motivations needed for this kind of teacher placement.)

6) What is the effect of employing a cadre of especially trained, highly competent teachers in culturally deprived areas?

7) Longitudinal research should be done on the results of a slum school being entirely staffed by trained volunteers under a "Peace Corps-like" model--e.g., agreeing to live in the neighborhood of the school, to join its social life, to speak "its language," etc. (A beginning in this direction has been made by ex-Peace Corpsmen in one city but it has not been totally successful, perhaps, because the volunteers have not really carried through the entire range of involvement and have not lived in the neighborhood, etc.)

8) What should be the role, if any, of citizen volunteer efforts in working with the schools to control the problems of the culturally deprived children?

9) In view of the high degree of father absence in the homes of culturally deprived children, how would the presence of male elementary school teachers affect the behavior and achievement of such children? What would be the effect of the provision of male models for a variety of situations in the elementary schools?

School Programs and Personnel - School Organization

It is quite possible that the present organization of the public school with its emphasis on age grouping of children, formal classroom arrangement of teachers and students, administrative arrangements, record keeping, etc., may not be the ideal set of arrangements for all learning situations. The educational problems of culturally deprived children warrant research and action programs which focus on all aspects of the school--including school organization and administration.

Some of the major problems in this area are:

A) How do children (and their parents) from culturally deprived homes relate to the schools and what are the specific aspects of the school organization and practices which make the relationship effective or ineffective?

B) How does the image and perception of the school differ for culturally deprived and other groups of children (and their parents)? How do these perceptions change at different stages of the school program? What in the child and what in the school makes for positive and negative perceptions?

C) What plans for organizing a school can most effectively improve the learning patterns of culturally deprived children, their perceptions of school authority, and their self-image?

Some of the more specific research questions in this area are the following:

1) Study the socialization of the child into the patterns of involvement in the school, i.e., embracement + alienation by investigation of procedures and processes in the school whereby the pupil is involved in his role.

2) How does the social structure of the school facilitate its function as a resocializing agency?

3) Research dealing with the ideal racial balance required in order to maximize academic and social achievement. In this case, we view the school as a social system where participants interact and this interaction is closely related to attitudes, expectations, statuses and roles. These variables cannot be separated from cognitive learning. In other words, the learning performance of the student--as measured by standardized tests--cannot and should not be isolated from his background, his expectations, his aspirations and a variety of social psychological factors. In dealing with the "ideal racial balance," it is necessary to control for the sex, social class, age and cognitive level of the student.

4) Following the identification of the "ideal racial balance," what are the processes and methods required for the maintenance of an integrated, as opposed to an inter-racial, school system. The position taken here is that there is a difference between the inter-racial and integrated school; the former is accomplished merely by

the "mixing" of students of different races--for example by bussing in a group of Negro students we have an inter-racial situation but not necessarily a school setting where students are equally involved in all aspects of the school program. Again taking the position that certain social and demographic variables are related to school performance, research dealing with the main force of "ideal racial balance" must control for improvement and interactional variables. The impact of the peer group, for example, is no doubt greater for adolescents than younger children, and the peer group structure has been found to be related to academic performance.

5) Should consideration be given to modification of the traditional length of the school day for extra-class instruction and cultural enrichment programs? Experiments should be conducted with various organizations of a longer school day as well as with a longer school term.

6) Can major changes in record keeping, grading procedures, ungraded classes, etc. have any useful effect on the learning of culturally deprived students?

7) In the culturally deprived group there seems to be clear evidence of school vs. community alienation. How can this be reduced? Would a radical revision of school administrative procedures be helpful? For example, would a cadre of parents especially recruited and paid be a useful device in reducing this alienation? Would a six week orientation for children be helpful before actual teaching begins?

8) Longitudinal study of the effectiveness of direct parent participation in early intervention programs.

9) It might be possible to organize boarding-residential schools for boys of the junior-high school age. How effective are boarding-residential schools for culturally deprived adolescents? One school might include chiefly boys from the lower part of the working class, half of them reared by fathers and mothers, half by mothers entirely, the hard-core of the slum. A second school might include boys from the top group of working families (stable semi-skilled, as well as skilled workers, and higher status domestic workers.) The variables to be controlled would be socio-economic level, family type, I.Q. level, sex and age. The experimental variables would be educational philosophy, teaching methods, disciplinary regime, types of reading instruction, types of curricular materials in reading, arithmetic, social studies, and art and kinds of guidance techniques. The basic experimental variable, however, is that of residence. To measure the effect of this variable, the behavior and achievement of students in the residential-school populations should be compared with that of studies in two public schools, with matched populations.

10) The establishment of lighthouse-demonstration centers to show the best of current practice to educators. Educators have to see programs in operation to be convinced--so a few programs (like some of the operations of the Great Cities programs) should encourage visitations, conduct short term workshops, summer programs, etc.